

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the following remarks.

Claims 11, 12, 14, 15, and 17-20 stand rejected, under 35 USC §103(a), as being unpatentable over Simmons et al. (US 2004/0053586) in view of Anim-Appiah et al. (US 2004/0100898). Claims 13 and 16 stand rejected, under 35 USC §103(a), as being unpatentable over Simmons in view of Anim-Appiah and Allott et al. (US 2002/0160738). The Applicants respectfully traverse these rejections as follows.

Claim 11 defines a direct conversion reception apparatus that: (1) measures the reception quality of each time slot of a communication frame, (2) estimates a gain, to be applied to a signal, for each time slot based on the measured reception quality, (3) applies each of the estimated gains to a received signal during a time slot of a communication frame, and (4) calibrates an offset voltage to be applied to a signal of a frame based on a maximum of the estimated gains. The claimed subject matter provides the advantages of: (a) minimizing the influence of a remaining offset voltage in gain control during a reception operation, thus making it possible to prevent saturation and sensitivity degradation even when power control is performed in multi-slot transmission, and (b) calibrating an offset voltage without increasing current consumption (see paragraph [0081] of Applicants' published specification).

The Office Action acknowledges that Simmons does not disclose the Applicants' claimed subject matter of measuring signal reception quality, estimating a gain based on the measured reception quality, and applying the estimated gains to a signal for each slot of a communication frame (see Office Action page 3, third paragraph). To overcome this deficiency, the Office

Action proposes that Anim-Appiah discloses receiving a gain control setting while processing the preamble of a packet and calculating the gain of each of a plurality of subchannels (see page 4, lines 1-4).

However, Anim-Appiah discloses communicating packets via an orthogonal frequency division multiplexing (OFDM) system that conveys a packet data symbol over one or more discrete frequency carriers (i.e., channels) (see Anim-Appiah paragraph [0002], lines 4-10). Each packet includes a preamble, a header, and payload information (see paragraph 0003], lines 1-3).

Anim-Appiah does not disclose a frame or a time slot of a frame. Thus, it necessarily follows *per force* that Anim-Appiah cannot disclose the Applicants' claimed subject matter of: (1) measuring signal reception quality for each time slot of a communication frame, (2) estimating a gain based on the measured reception quality for each time slot of the communication frame, (3) applying the estimated gains to a signal for each time slot of a communication frame, and (4) calibrating an offset voltage to be applied to a signal of a frame based on a maximum of the estimated gains.

Moreover, the Office has acknowledged that Anim-Appiah does not disclose the Applicants' claimed subject matter of calibrating an offset voltage based on the maximum gain of those estimated for each time slot of a frame (see Office Action dated May 27, 2009, page 3, lines 1-3). And the present Office Action provides no basis to support a contention that Anim-Appiah does disclose this subject matter (see present Office Action page 4, lines 1-5). Instead, the present Office Action proposes that Anim-Appiah discloses demodulating a packet to obtain a signal of constant energy, calculating a gain of each of a plurality of subchannels, and calculating a noise-plus-interference power value (see page 4, lines 1-5). Nowhere does Anim-

Appiah disclose the Applicants' claimed subject matter of calibrating an offset voltage based on the maximum gain of those estimated for each time slot of a frame; and Simmons is not cited in the present Office Action for supplementing the teachings of Anim-Appiah in this regard.

Accordingly, the Applicants submit that the teachings of Simmons and Anim-Appiah, even if combined as proposed in the Office Action, still would lack the above-noted features of claim 11 and thus these references, considered individually or in combination, do not render obvious the subject matter defined by claim 11. Independent claims 17 and 19 similarly recite the above-mentioned subject matter distinguishing apparatus claim 11 from the applied references, though claim 17 does so with respect to a method. Therefore, allowance of claims 11, 17, and 19 and all claims dependent therefrom is warranted.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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